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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,191	10/14/2003	Long Bao Zhang	USDP2274A-ALL	8860
30265	7590	03/14/2007		
RAYMOND Y. CHAN			EXAMINER	
108 N. YNEZ AVE., SUITE 128			HAN, JASON	
MONTEREY PARK, CA 91754				
			ART UNIT	PAPER NUMBER
			2875	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/14/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/684,191	<b>Applicant(s)</b> ZHANG, LONG BAO	
	<b>Examiner</b> Jason M. Han	<b>Art Unit</b> 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 16-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 12, 2007 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to Claims 3-15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the supporting frame being a hollow member having a circular cross section (re: Claims 27-29) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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The following claims have been rejected in light of the specification, but rendered the broadest interpretation as stated by the Applicant within the context of the claim language and as construed by the Examiner [MPEP 2111].

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### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 16-17, 19, 21, 24, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Abathi et al. (U.S. Patent 5,890,794 A).
5. With regards to Claim 16, Abathi discloses a light source arrangement including:

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- An electric input adapter [Figure 5: (24-26, 66)] for electrically connecting with a power source [Column 5, Lines 62-64];
- A light head [Figures 3-5] including:
  - = An elongated supporting frame [Figure 5: (40)], which is made of good heat conduction material, having a first end, an opposed dissipating end, and a peripheral surface extending from the first end to the dissipating end; and
- A luminary unit [Figures 1-2] including:
  - = A circuit [Figure 2: (20-22)] provided on the peripheral surface [Figures 1-2: (12, 14)] of the supporting frame and electrically connected with the electric input adapter, and
  - = A plurality of luminary elements [Figure 1: (18)] spacedly mounted on the peripheral surface of the supporting frame to electrically connect to the circuit for emitting light, wherein when each of the luminary elements emits the light in a radial direction with respect to the supporting frame, the supporting frame is adapted for transmitting heat from the luminary element at the dissipating end of the supporting frame [Column 8, Line 64 – Column 9, Line 9]; and
- A heat dissipating member [Figure 5: (62)] mounted at the dissipating end of the supporting frame to directly dissipate the heat generated from the luminary unit by means of heat transfer.

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6. With regards to Claim 17, Abathi discloses the light head further including a transparent light shelter [Figure 5: (64)] sealed on the peripheral surface of the supporting frame to protect the luminary elements.
7. With regards to Claim 19, Abathi discloses the circuit having a through guiding window [Figure 5: (110)], wherein the circuit [Figure 2: (20-22)] is printed on the peripheral surface [Figures 1-2: (12, 14)] of the supporting frame, whereby the luminary element [Figure 1: (18)] is mounted at the peripheral surface of the supporting frame within the guiding window [Figure 5: (110)] to electrically couple with the circuit.
8. With regards to Claim 21, Abathi discloses the luminary element [Figure 1: (18)] having two terminal electrodes [Figure 2: (16); Figure 3: (28)] electrically coupling with the peripheral surface of the supporting frame and electrically connecting to the circuit respectively.
9. With regards to Claim 24, Abathi discloses the supporting frame [Figure 3: (40, 42)] being an elongated solid member extending from the first end to another dissipating end.
10. With regards to Claim 27, Abathi discloses the supporting frame [Figure 5: (40)] being a hollow member [Figure 5: (80)] having a circular cross section.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 18, 20, 22-23, 25-26, and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abathi et al. (U.S. Patent 5,890,794 A).

12. With regards to Claim 18, Abathi discloses the claimed invention as cited above, but does not specifically teach the light shelter having a spherical shaped light projecting portion projected from the peripheral surface of the supporting frame to align with the luminary elements.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the light shelter to have a spherical shaped light projecting portion projecting from the peripheral surface of the supporting frame to align with the luminary elements, since it has been held to be within the general skill of a worker that mere change of form or shape of an invention involves only routine skill in the art. *Span-Deck Inc. c. Fab-Con, Inc.* (CA 8, 1982) 215USPQ 835. In this case, changing the shape of the light shelter to incorporate a spherical shaped light projecting portion that is aligned with the luminary elements may efficiently utilize the illumination for a desired optical effect [e.g., diffusion or collimation], which may add to a more ostensible signaling function. Abathi corroborates the motivation, "Thus, referring to FIG. 7, the inner surface 84 of transparent cover 64 may be made diffuse, or roughened, in a number of ways" [Column 7, Lines 13-15].

13. With regards to Claim 20 (depending off Claim 18), Abathi teaches the circuit having a guiding window [Figure 5: (110)], wherein the circuit [Figure 2: (20-22)] is printed on the peripheral surface [Figures 1-2: (12, 14)] of the supporting frame, whereby the luminary element [Figure 1: (18)] is mounted at the peripheral surface of

the supporting frame within the guiding window [Figure 5: (110)] to electrically couple with the circuit.

14. With regard to Claims 22 and 23 (depending off Claims 18 and 20, respectively), Abathi teaches the luminary element [Figure 1: (18)] having two terminal electrodes [Figure 2: (16); Figure 3: (28)] electrically coupling with the peripheral surface of the supporting frame and electrically connecting to the circuit respectively.

15. With regard to Claims 25 and 26 (depending off Claims 18 and 23, respectively), Abathi teaches the supporting frame [Figure 3: (40, 42)] being an elongated solid member extending from the first end to another dissipating end.

16. With regard to Claims 28 and 29 (depending off Claims 18 and 23, respectively), Abathi discloses the supporting frame [Figure 5: (40)] being a hollow member [Figure 5: (80)] having a circular cross section.

17. With regard to Claims 30-32, Abathi discloses the claimed invention as cited above. In addition, Abathi teaches the supporting frame [Figure 5: (40)] being a hollow member [Figure 5: (80)], but does not specifically teach the cross section of the hollow member being polygonal.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated the hollow member to have a polygonal cross section, since it has been held to be within the general skill of a worker that mere change of form or shape of an invention involves only routine skill in the art. *Span-Deck Inc. v. Fab-Con, Inc.* (CA 8, 1982) 215USPQ 835. In this case, a polygonal



cross section may provide for a simplified means for determining the direction of the light sources/illumination.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason M Han  
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Art Unit 2875

  
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JMH (3/8/2007)